REMARKS

Claims 1-7 and 9-12 are presented for further examination. Claim 1 has been amended, and claims 10-12 are new.

In the final Office Action dated April 20, 2004, the Examiner rejected claims 1-7 and 9 under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,246,673 ("Tiedemann '673"). Applicants respectfully disagree with the basis for the rejection and request reconsideration and further examination of the claims in this Request for Continued Examination.

A discussion regarding the distinction between the Tiedemann '673 reference and the claims, as amended or newly added, follows.

Turning first to claim 1, a hard handoff method from an asynchronous CDMA base station to a synchronous CDMA base station is provided. In the first step, the synchronous CDMA base station transmit asynchronous CDMA channels, which includes an asynchronous CDMA synchronization channel and an asynchronous CDMA common pilot channel, to a mobile terminal. As a result, the mobile terminal receives both the asynchronous CDMA synchronization channel and the asynchronous CDMA common pilot channel from the synchronous CDMA base station (but not an asynchronous CDMA base station).

The mobile phone recognizes the synchronous base station as an asynchronous base station because the synchronous base station transmits the asynchronous CDMA channel (in other words, there are no changes or modifications in the mobile phone that is in communication with the asynchronous CDMA base station).

On the other hand, in the Tiedemann '673 patent, the mobile phone does not receive any asynchronous pilot channel from a synchronous base station. In column 17, lines 54-66, a pilot channel (800) and a synch channel (802) are transmitted to the mobile phone. However, these channels are synchronous channels (column 17, lines 59-62, "Pilot channel 800 may be a conventional pilot channel according to IS-95. Pilot channel 800 is transmitted by synchronous base station at different PN offset from the system time zero reference," and at column 17, lines 64-66, "Synch channel 802 may be a conventional pilot channel according to IS-95 (IS-95 means a synchronous signal)."

In the Tiedemann '673 patent, each of the two base stations BTS1 and BTS2 performs an adjustment of the forward link frame offset (TO) to minimize of TO1-TO2-ΔT as shown in Figure 7 (referring to step 720 and 722 and column 17, lines 38-49). A further distinction from the present invention is that in the Tiedemann '673 patent, the BTS1 (asynchronous serving base station) sends to the mobile phone the Neighbor List of BTS2 pilot offset information, and this is the reason why the mobile phone does not receive an asynchronous CDMA pilot channel and then not recognize a synchronous base station (the synchronous CDMA base station in the present invention).

More particularly, in the Tiedemann '673 patent, the Neighbor List is illustrated in column 4, line 46-column 5, line 6 as follows:

> In the IS-95 and cdma2000 systems, the base station identifies the neighboring base stations to the mobile stations with which it has established communication using a neighbor list message. The neighbor list message identifies a neighboring base station according to the PN sequence offset at which it transmits the pilot signal.

It should be noted that "the pilot signal" is a synchronous (not asynchronous) pilot signal as illustrated in Figure 8 (Please refer to "Pilot channel 800 is transmitted by synchronous base stations at different PN offsets from the system time zero reference." Column 17, lines 60-62.

Also, in the Tiedemann '673 patent, the mobile phone, which is communicating with an asynchronous CDMA base station, must recognize a synchronous (not asynchronous) pilot signal from a synchronous CDMA base station. As a result, in the mobile phone of the Tiedemann '673 patent, two modems in the mobile phone must operate simultaneously to process asynchronous signals from a serving base station (3G asynchronous BTS) and synchronous signals from the target base station (2G synchronous BTS) because the asynchronous pilot signal is different from the synchronous pilot signal in frequency, coding and chip rate (please refer to the Figures A and B below). These operations using two modems cause high power consumption in the mobile phone.

Although the mobile phone of the present invention is a dual mode phone that can work in the asynchronous and synchronous CDMA systems, two modems in the phone are not

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working simultaneously in order to process asynchronous signals from a serving base station (3G asynchronous BTS) and synchronous signals from the target base station (2G synchronous BTS).

In the second step recited in claim 1, on the basis of an intensity measurement of the asynchronous CDMA common pilot channel, the mobile terminal reports the measured result to the asynchronous CDMA base station.

On the other hand, in the Tiedemann '673 patent, since the mobile phone does not receive an asynchronous pilot channel from a synchronous base station to be handed off, the mobile phone measures an intensity of the synchronous CDMA channel from a synchronous base station to be handed off (it should be note that the ID channel 804 is not a common pilot channel).

As a result, according to the present invention, the mobile phone, being in communication with the asynchronous CDMA base station, can recognize the 2G synchronous base station as a 3G asynchronous base station.

Hence, applicants submit that claim 1 is not disclosed in the Tiedemann '673 patent.

Turning to claim 2, the starting points of both the asynchronous CDMA synchronization channel and the asynchronous CDMA common pilot channel of the asynchronous CDMA base station (3G) are synchronized with the starting point of a pilot channel of the synchronous CDMA base station (2G).

The use of the asynchronous pilot and synchronization channels and the starting point synchronization, as set forth in the present invention, can reduce power consumption of the mobile phone and does not need the ID channel 804 (for PN offset value) of the Tiedemann '673 patent.

Below is a summary table of key distinctions between the Tiedemann '673 reference and the present invention:

	Present invention	Tiedemann Patent
What does mobile phone receive from the synchronous base station?	1) the **asynchronous** CDMA synchronization channel. 2) the **asynchronization** CDMA common pilot channel.	1) pilot channel (**synchronization** channel based on IS-95) 2) synch channel (**synchronous** channel based on IS-95) 3) ID channel
synchronization between 3G asynchronous channel and 2G synchronous channel	the starting points of both the asynchronous CDMA synchronization channel and the asynchronous CDMA common pilot channel of the asynchronous CDMA base station (3G) are synchronized with the starting point of a pilot channel of the synchronous CDMA base station (2G).	no synchronization between 3G asynchronous channel and 2G synchronous channel so that an adjustment of the forward link frame offsets (TO1 and TO2 is required).
Pilot intensity measurement (PSMM) in the mobile phone	use the **asynchronous** CDMA common pilot channel from the synchronous base station.	use the **synchronous** CDMA common pilot channel from the synchronous base station (referring to pilot channel 800 in Fig. 8 and column 17, line 54 - column 18, line 3)
mobile phone	one asynchronous modem works	asynchronous and synchronous modems must work simultaneously
power consumption of mobile phone	Low	high
PN offset information of the target base station	not required	required (so that ID channel is required)

Below are Figures A and B. Figure A represents the structure for coding of the asynchronous pilot signal in accordance with the present invention.
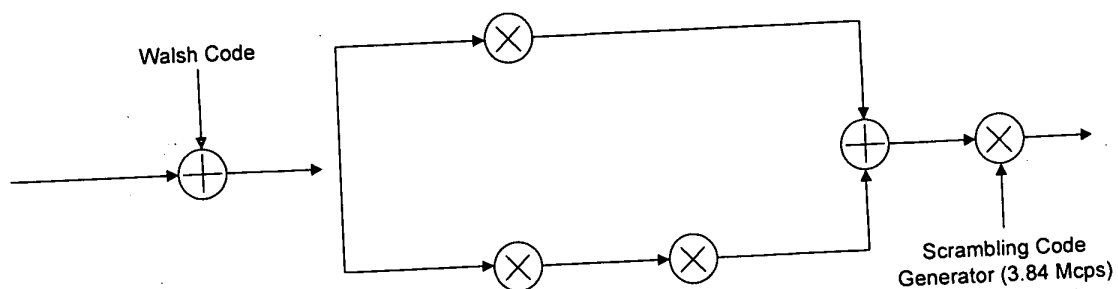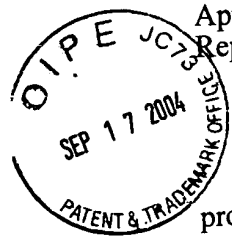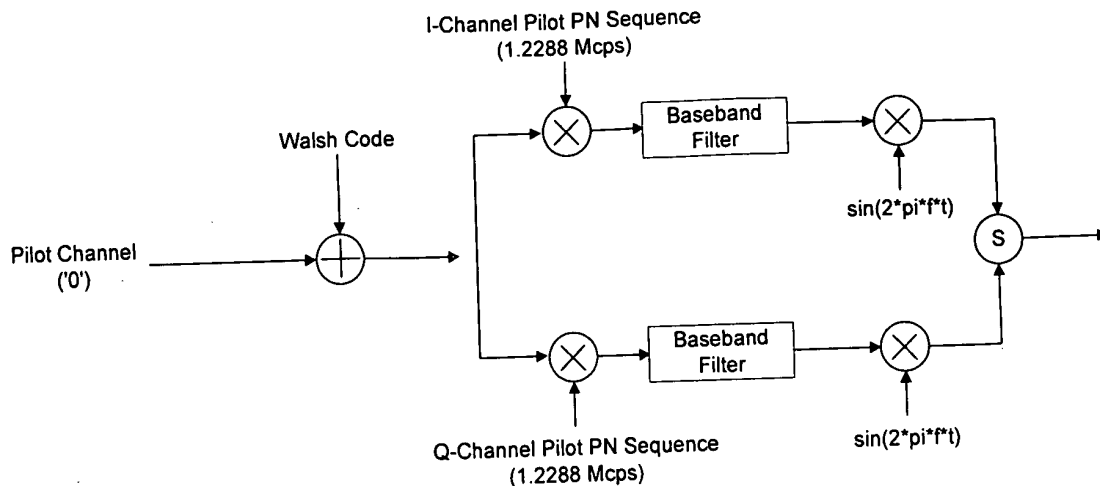
Figure B represents the structure coding of the synchronous pilot signal to be processed in the Tiedemann '673 patent.

I-Channel Pilot PN Sequence
(1.2288 Mcps)

Walsh Code

Baseband Filter

$\sin(2*pi*f*t)$

S

Pilot Channel
('0')

Baseband Filter

Q-Channel Pilot PN Sequence
(1.2288 Mcps)

$\sin(2*pi*f*t)$

The difference between the present invention and the Tiedemann '673 patent is definitely shown schematically. Also, the Tiedemann '673 patent does not teach a possibility of a 3G asynchronous pilot channel from the 2G synchronous base station. Furthermore, these characteristics of the present invention are shown in independent claim 1 and are more definitely clear when the meanings between "asynchronous and "synchronous" in claim 1 are carefully discriminated.

In view of the foregoing, applicants respectfully submit that claims 1-7 and 9 are clearly allowable over the Tiedemann '673 reference. New claims 10-12 include the recitation of limitations discussed above with respect to claims 1-7 and 9, and applicants respectfully submit that these claims are allowable for the reasons discussed above.

In the event the Examiner disagrees or finds minor informalities that can be resolved by telephone conference, applicants' undersigned representative respectfully requests a telephone interview with the Examiner to more expeditiously resolve prosecution of this application. Accompanying this amendment is a request for interview. Applicants' undersigned representative can be reached by telephone at (206) 622-4900.

Consequently, early and favorable allowance of these claims and passing of this application to publication is respectfully solicited.

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The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

E. Russell Tarleton
Registration No. 31,800

ERT:alb

Enclosure:
Postcard
Request for Interview

701 Fifth Avenue, Suite 6300
Seattle, Washington 98104-7092
Phone: (206) 622-4900
Fax: (206) 682-6031

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